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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/756,956	01/09/2001	James D. Cliver	2960	6176

7590 05/26/2005
Terry T. Moyer
P. O. Box 1927
Spartanburg, SC 29304

EXAMINER

KUMAR, PREETI

ART UNIT	PAPER NUMBER
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1751

DATE MAILED: 05/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/756,956

Applicant(s)

CLIVER ET AL

Examiner

Preeti Kumar

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Non-Final Rejection

1. Claims 1-42 pending.

Response to Amendment

2. The rejection of claims 1-8, 17, 20, 22, 25-26, 28, 30, 34, and 36-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crenshaw (US 5,861,044), and further in view of Bouwknecht et al. (US 4,859,207) is withdrawn in light of applicants amendment to the claims.
3. The rejection of claims 21 and 35 under 35 U.S.C. 103(a) as unpatentable over Crenshaw and Bouwknecht et al. in view of Hauser et al. (US 5,667,533) is withdrawn.
4. The rejection of claims 3,4,6,9,14,16,27,29 and 31 under 35 U.S.C. 103(a) as being unpatentable over Crenshaw and Bouwknecht et al. in view of Egli et al. (US 3,743,477) is withdrawn in light of applicants amendment to the claims.
5. The rejection of claims 10-13, 15, 18-19, 23-24, 32-33, and 38-42 under 35 U.S.C. 103(a) as being unpatentable over Crenshaw and Bouwknecht et al. in view of Fadler nee Jack et al. (US 4,023,925) is withdrawn in light of applicants amendment to the claims.

Response to Arguments

6. Applicant's arguments filed 11/23/2004 with respect to claims 1-42 have been considered but are moot in view of the new ground(s) of rejection.

New Grounds of Rejection

Claim Objections

7. Claim 37 is objected to because of the following informalities: Claim 37 does not make any sense. Examiner is unsure as to what patent protection is being sought for by the limitation recited in claim 37. Appropriate correction is required.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 1, 10-13, 15-16, 22, and 38 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 10-13 and 15-16 recite the limitation "step of dying" or "step of continuously dying" in claim 1. There is insufficient antecedent basis for this limitation in the claim.

Claims 1, 22, and 38 recite the limitation "without requiring a subsequent operation to remove the chemical substance from the fabric" which renders the claim indefinite. The term "without requiring a subsequent operation" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Specifically it is unclear if the term "without requiring" is meant to mean that it is excluded or if it is language to mean that the subsequent operation is optional. Also, if this limitation is not optional, then it is not commensurate in scope with

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the specification since figure 1 illustrates in step 10 a wash step to remove the excess chemical.

Furthermore, the term "subsequent operation" is not defined by the specification as to what encompasses said subsequent operation and thus, is indefinite because the limitation to subsequent operation does not make clear or define the boundaries of the subject matter for which patent protection is sought.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

13. Claims 1-9, 14, 16-22, 25-39 and 41-42 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kanzig et al. (WO 99/67459).

Kanzig et al. teach a process for printing hydrophobic fibre materials with disperse dyes, which comprises 1) dyeing or printing the fibre materials overall with a disperse dye, and 2) printing the fibre materials in areas with a printing paste, which comprises as component (A), at least one cationic assistant, as component (B), at least one polyethylene glycol, as component (C), at least one nonionogenic detergent and, optionally, as component (D), at least one disperse dye, it being possible for steps 1) and 2) to be carried out in any sequence and for step 2) to be carried out repeatedly without using any dye, or using different dyes, and, if necessary, drying the fibre material thus treated and then fixing the dye on the fibre material by heat treatment. See abstract.

Kanzig et al. teach that the disperse dyes suitable for steps 1) and 2) of the novel process are, for example, those dyes include, for example, car-boxylic acid- and/or sulfonic acid group-free nitro, amino, aminoketone, ketoninime, methine, polymethine, diphenylamine, quinoline, benzimidazole, xanthene, oxazine or coumarine dyes and, in particular, anthraquinone and azo dyes, such as mono- or disazo dyes. See page 2, paragraph 1.

Kanzig et al. teach that In addition to the dye, the dye liquor can contain other customary additives, for example acid donors, such as aliphatic amine chlorides or magnesium chloride, the aqueous solutions of inorganic salts, such as of alkali chlorides

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or alkali sulfates, alkali hydroxides, urea, thickeners, such as alginate thickeners, water-soluble cellulose alkyl ether, and also levelling agents, antifoams and/or deaerators, penetration accelerators, migration inhibitors, UV absorbers and wetting agents. See page 4, paragraph 3.

Kanzig et al. teach that the printing paste which may optionally be used in step 1) is a printing paste customarily used in printing technology, which comprises, in addition to the dye, the conventional assistants, for example thickeners of natural or synthetic origin, for example commercially available alginate thickeners, starch ethers or carob seed grain ether, in particular sodium alginate, by themselves or in admixture with modified cellulose, preferably with 20 to 25% by weight of carboxymethylcellulose. It is preferred to use synthetic thickeners, for example those based on poly(meth)acrylic acids, poly(meth)acrylamides, and their co- or terpolymers. If desired, the printing paste can also contain acid donors, such as butyrolactone or sodium hydrogenphosphate, preservatives, sequestrants, emulsifiers, water-insoluble solvents, oxidants, UV absorbers or deaerators. For printing the hydrophobic fibre materials, the printing paste is applied overall or in areas directly onto the fibre material, conveniently using printing machines of conventional make, for example rotogravure, rotary screen printing and flat screen printing apparatus. See page 4 paragraphs 4-5 and page 7 paragraphs 2-3 and page 8 paragraph 1.

Kanzig et al. teach that the process can be used for different hydrophobic fibre materials. Polyester fibre materials are preferred. Also suitable are polyester-containing fibre blends, i.e. mixtures of polyester and other fibres, in particular cotton/polyester

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fibre materials. Wovens, knits or webs of these fibres are mainly used. See page 7, paragraph 4-5.

Kanzig et al. illustrate a two step printing/dyeing process wherein one printing/dyeing step is done all over the polyester pile fabric and the second printing/dyeing step is done in specific areas which results in a multicolored fabric having very good fastness. See example 5 on pages 13-14. Accordingly, the teachings of Kanzig et al. appear to anticipate the material limitations of the instant claims.

Alternatively, even if the broad teachings of Kanzig et al. are not sufficient to anticipate the material limitations of the instant claims, it would have been nonetheless obvious to one of ordinary skill in the art, to arrive at a process for manufacturing a patterned fabric comprising the steps of printing with a chemical substance and then dyeing substantially the entire fabric as recited by the instant claims because Kanzig et al. illustrate a process of forming a multicolored fabric comprising 1) dyeing or printing the fibre materials overall with a disperse dye, and 2) printing the fibre materials in areas with a printing paste, which comprises as component (A), at least one cationic assistant, as component (B), at least one polyethylene glycol, as component (C), at least one nonionogenic detergent and, optionally, as component (D), at least one disperse dye, it being possible for steps 1) and 2) to be carried out in any sequence and for step 2) to be carried out repeatedly without using any dye, or using different dyes.

14. Claims 1-42 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Thomas et al. (US 4,131,422).

Thomas et al. teach polymer-printed fabrics are produced by applying to a textile fabric substrate, in a pre-determined pattern, an aqueous admixture consisting essentially of a substantially water-soluble acid dyeable polymer. The wetted printed substrate is dried to remove substantially all the water and thereafter cured. The cured polymer printed substrate is then dyed with a dye admixture containing an acid dyestuff preferential to the polymer coated portion of the substrate. See abstract.

Regarding the chemical substance used for printing, Thomas et al. teach that the essential ingredient of the aqueous admixture employed to produce the polymer-printed fabrics with differential dyeing characteristics of the present invention is the substantially water-soluble acid dyeable polymer. However, in addition to the acid dyeable polymer additional components, such as thickening agents, hygroscopic agents, anti-foaming agents, catalysts, volatile stabilizing agents and water fugitive tints can be incorporated in minor effective amounts in the liquid admixture. The amount of each of the additional components incorporated into the aqueous admixture can vary widely and will be dependent to a large extent upon the properties sought in the resulting liquid admixture. For example, in order to maintain the liquid admixture in a preselected viscosity range of from about 5 to 50,000 centipoise it is often necessary to incorporate into the aqueous admixture, in addition to the substantially water-soluble acid dyeable polymeric constituent, an effective amount of a thickening agent. The amount of thickening agent employed can vary widely depending upon the amount of polymeric constituent employed as well as the type of such constituent. However, it has been found generally desirable to incorporate from about 0.5 to about 3 weight percent of a thickening agent

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into the aqueous admixture to provide an aqueous admixture having the desired viscosity. Any suitable thickening agent can be employed provided it is compatible with the polymer, the textile substrate, and the acid dye stuff employed to dye the polymeric constituent. Typical of such thickeners are polyacrylic acids, hydroxy ethyl cellulose, natural gums, and the like. See col.5,ln.5-40.

Regarding the aqueous dye bath, Thomas et al. teach in example 1 that the polyester printed fabric is dyed using an aqueous dye bath. In example 9, Thomas et al. illustrate that the printed polyester fabric is dyed in an aqueous bath of 2 disperse dyes of different colors. Accordingly, the teachings of Thomas et al. appear to anticipate the material limitations of the instant claims.

Alternatively, even if the broad teachings of Thomas et al. are not sufficient to anticipate the material limitations of the instant claims, it would have been nonetheless obvious to one of ordinary skill in the art, to arrive at the specified continuous or semicontinuous dyeing process wherein the entire fabric is exposed to the dye as recited by the instant claims because Thomas et al. teach employing the same disperse dyes in an aqueous dye bath which are known in the art to be used in the various continuous and semicontinuous dyeing processes in general.

15. Claims 1, 3-4, 7, 9, 14, 17, 19-20, 22, 30, 31, 33-34, 36-38 and 42 are rejected under 35 U.S.C. 103(a) as obvious over Moore et al. (US 5,984,977).

Moore et al. teach a method for printing articles formed from cellulose, said method comprising the steps of:

(a) printing the article with a dye blocking print paste, said composition comprising: a

thickener paste; a cross-linking resin and a dye resist; and

(b) thereafter dyeing the article.

Moore et al. also teach a method for printing articles formed from cellulose, said method comprising the steps of:

(a) printing the article with a dye blocking print paste, said composition comprising: a thickener paste; a pre-catalyzed cross-linking resin and a dye resist; and

(b) thereafter dyeing the article.

Finally Moore et al. teach a method for printing articles formed from cellulose, said method comprising the steps of:

(a) printing the article with a dye blocking print paste, said composition comprising: a thickener paste; a pre-catalyzed cross-linking resin and a dye resist;

(b) printing the article with a dye enhancing print paste, said dye enhancing print paste including: (i) a thickener and (ii) an enhancing agent; and

(c) thereafter dyeing the article.

See claims and col.2, ln20-col.3,ln.40 where Moore et al. teach a process of forming a multicolored cotton fabric.

Moore et al. do not teach exposing substantially the entire fabric to an aqueous dye liquor as recited by the instant claims.

However, it would have been obvious to one of ordinary skill in the art to modify the teaching of Moore et al. and use an aqueous dye liquor on the entire fabric as recited by the instant claims since Moore et al. suggest printing the fabric with a print paste and there after dyeing the article in general.

Conclusion

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Preeti Kumar whose telephone number is 571-272-1320. The examiner can normally be reached on M-F 9:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra N. Gupta can be reached on 571-272-1316. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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